Amendments to the Claims

Claim 1 **(Currently Amended)** An optical disc ~~including a data area and a time map area,~~ which is readable by a reproducing apparatus that preliminarily reads a table and performs a random access reproduction of a video object by referring to the table, the optical disc including a data area and a time map area,

the data area having recorded therein ~~recording~~ a video object that includes a plurality of data units, each of which contains at least one picture,

the time map area having recorded therein the ~~recording a~~ table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times, and

the time map area further having recorded therein ~~recording~~ offset information used to correct the table after a ~~the~~ first portion of the video object is deleted.

Claim 2 **(Currently Amended)** The optical disc of Claim 1, ~~1~~ further including

a program chain area having recorded therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.

Claim 3 **(Currently Amended)** A recording apparatus for recording video data onto an optical disc, the recording apparatus comprising:

an input unit operable to receive input video data to be recorded;

a compressing unit operable to compress the input video data and generate a video object containing a plurality of data units, each of which contains at least one picture;

a writing unit operable to write data onto the optical disc; and

a control unit operable to control the writing unit, wherein

the control unit is operable to

(a) control ~~controls~~ the writing unit to write the video object onto a data area of the optical disc,

(b) generate ~~generates~~ a table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times,

(c) generate ~~generates~~ offset information used to correct the table after a ~~the~~ first portion of the video object is deleted, and

(d) control ~~controls~~ the writing unit to write the table into a time map area of the optical disc.

Claim 4 **(Currently Amended)** The recording apparatus of Claim 3, wherein

when receiving a notification that the first portion of the video object has been deleted, the control unit is operable to update ~~updates~~ the table and the offset information in accordance with a reproduction time of the deleted first portion, and control ~~controls~~ the writing unit to write the updated table and offset information.

Claim 5 **(Currently Amended)** The recording apparatus of Claim 3, wherein the optical disc further includes

a program chain area having recorded therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.

Claim 6 **(Currently Amended)** A recording method for use in a recording apparatus for recording onto an optical disc a video object containing a plurality of data units, each of which contains at least one picture, the recording method comprising ~~the steps of~~:

~~(a)~~ writing the video object onto a data area of the optical disc; ~~disc,~~

~~(b)~~ generating a table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video

object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times; ~~times,~~

~~(c)~~ generating offset information used to correct the table after a ~~the~~ first portion of the video object is deleted; ~~deleted,~~ and

~~(d)~~ writing the table and the offset information onto a time map area of the optical disc.

Claim 7 **(Currently Amended)** The recording method of Claim 6, ~~6~~ further comprising ~~the step of~~

when receiving a notification that the first portion of the video object has been deleted, updating the table and the offset information in accordance with a reproduction time of the deleted first portion, and writing the updated table and offset information.

Claim 8 **(Currently Amended)** The recording method of Claim 6, wherein the optical disc further includes

a program chain area having recorded therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.

Claim 9 **(Currently Amended)** A reproducing apparatus for reproducing the video object recorded on the optical disc defined in Claim 1, the reproducing apparatus comprising:

a reading unit operable to read data from the optical disc;

a reproducing unit operable to reproduce the video object; and

a control unit operable to control the reading unit and the reproducing unit, wherein

the control unit is operable to

(a) receive ~~receives~~ an input reproduction start time,

(b) control ~~controls~~ the reading unit to read out the table and the offset information,

(c) refer ~~refers~~ to the read-out table and offset information and identify ~~identifies~~ a data unit that includes a picture to be reproduced at the input reproduction start time, and

(d) control ~~controls~~ the reading unit and the reproducing unit to start reproducing in accordance with the identified data unit.

Claim 10 **(Currently Amended)** The reproducing apparatus of Claim 9, wherein the optical disc further includes

a program chain area having recorded therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.

Claim 11 **(Currently Amended)** A reproduction method for use in a reproducing apparatus for reproducing the video object recorded on the optical disc defined in Claim 1, the reproduction method comprising ~~the steps of~~:

~~(a)~~ receiving an input reproduction start time; ~~time,~~

~~(b)~~ controlling a ~~the~~ reading unit to read out the table and the offset information; ~~information,~~

~~(c)~~ referring to the read-out table and offset information and identifying a data unit that includes a picture to be reproduced at the input reproduction start time; ~~time,~~ and

(d) controlling the reading unit and a ~~the~~ reproducing unit to start reproducing in accordance with the identified data unit.

Claim 12 **(Currently Amended)** The reproduction method of Claim 11, wherein the optical disc further includes

a program chain area having recording therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.

Claim 13 **(Currently Amended)** A program recorded on a computer-readable recording medium ~~recording a program~~ for use in a recording apparatus for recording onto an optical disc a video object containing a plurality of data units, each of which contains at least one picture, the program allowing the recording apparatus ~~a computer~~ to execute ~~the steps of~~:

~~(a)~~ writing the video object onto a data area of the optical disc; ~~disc,~~

~~(b)~~ generating a table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times; ~~times,~~

~~(c)~~ generating offset information used to correct the table after a ~~the~~ first portion of the video object is deleted; ~~deleted,~~ and

~~(d)~~ writing the table and the offset information onto a time map area of the optical disc.

Claim 14 **(Currently Amended)** The program ~~computer-readable recording medium~~ of Claim 13, wherein the program further allows the computer to execute ~~the step of~~

when receiving a notification that the first portion of the video object has been deleted, updating the table and the offset information in accordance with a reproduction time of the deleted first portion, and writing the updated table and offset information.

Claim 15 **(Currently Amended)** The program ~~computer-readable recording medium~~ of Claim 13, wherein the optical disc further includes

a program chain area having recorded therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.

Claim 16 **(Currently Amended)** A program recorded on a computer-readable recording medium ~~recording a program~~ for use in a reproducing apparatus including (a) a reading unit operable to read data from the optical disc defined in Claim 1 and (b) a reproducing unit operable to reproduce a video object, the program allowing the reproducing apparatus ~~a computer~~ to execute ~~the steps of~~:

~~(a)~~ receiving an input reproduction start time; ~~time,~~

~~(b)~~ controlling the reading unit to read out the table and the offset information; ~~information,~~

~~(c)~~ referring to the read-out table and offset information and identifying a data unit that includes a picture to be reproduced at the input reproduction start time; ~~time,~~ and

~~(d)~~ controlling the reading unit and the reproducing unit to start reproducing in accordance with the identified data unit.

Claim 17 **(Currently Amended)** The program ~~computer-readable recording medium~~ of Claim 16, wherein the optical disc further includes

a program chain area having recorded therein ~~that records~~ a plurality of sets of cell information, each of which includes a start time and an end time which are used to identify a reproduction section in the video object, the plurality of sets of cell information being recorded in correspondence with reproduction orders.